

REMARKS

The following remarks are responsive to the Office Action mailed February 25, 2009 ("Action"). Reconsideration and allowance are respectfully requested based on the following remarks.

Allowable Subject Matter

Preliminarily, Applicants note with appreciation the indication that the application contains allowable subject matter. Specifically, claims 9-14 have been objected to for being dependent upon a rejected base claim, but would be allowable if amended to incorporate all the features of their ultimate base claim and any intervening claims.

Claim Rejections Under 35 U.S.C. § 112

Claims 25 and 33-34 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "indication" has been deleted from claim 25, thus rendering the rejection moot.

The phrase "program code means" has been deleted from claim 33 and claim 34 has been cancelled, thus rendering these rejections moot.

Claim Rejections Under 35 U.S.C. § 101

Claims 33 and 34 stand rejected under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter.

Applicants respectfully traverse, but to expedite prosecution, claim 33 has been amended to recite a "computer readable medium comprising computer program code that, when executed, causes a computer to perform the method of claim 32." Applicants submit that amended claim 33 is statutory. Claim 34 has been cancelled and hence the rejection is moot.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-23 and 26-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 6,359,938 to Keevill (hereinafter “Keevill”) in view of US Patent Publication 2005/0174929 to Hayashi (hereinafter “Hayashi”). Claims 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Keevill and Hayashi, further in view of US Patent 6,115,427 to Calderbank (hereinafter “Calderbank”). Applicants respectfully traverse for at least the following reasons.

Initially, Applicants note that the Action lists claims 9-14 as containing allowable subject matter, but has also indicated that these claims are rejected under 35 U.S.C. § 103(a). The Action does not cite to any reference nor set forth any analysis for rejecting these claims. As such, Applicants are led to believe that listing claims 9-14 as being rejected under 35 U.S.C. § 103(a) was a clerical error.

The combination of Keevill and Hayashi, even if proper, fails to teach or suggest “an accessor configured to access at least one symbol which is adapted to establish a distinguishable power based pattern for pilot carriers in the at least one symbol” as recited in claim 1. On page 5, the Office Action states “Keevill is silent on the pilot carrier symbols having a distinguishable power based pattern. However, Hayashi teaches a method and receiving device wherein the channel response calculation section (Section 22, Figure 15) contains a differential power calculator (237) that outputs a power corresponding to a change amount in the channel responses for pilot signals in one cycle or N symbols ([0205-0206]).” Applicants respectfully disagree. In [0206], Hayashi reads:

Referring to FIG. 15, the differential power calculator 237 determines a difference between channel responses for pilot signals output from the channel response calculation section 22 and the memory 231, squares the resultant difference value to obtain a differential power, and outputs the results to the inter-symbol filter 238. At this time, the controller 232 controls the memory 231 to output a channel response for a pilot signal immediately preceding a pilot signal corresponding to the channel response output from the channel response calculation section 22. The differential power output from the differential power calculator 237 corresponds to a change amount in the channel responses for pilot signals in one cycle (N symbols).

And, in [0207], Hayashi further reads:

The average calculator 239 averages the change amounts in channel responses obtained for the respective pilot signal-inserted carriers, and output the calculated average value to the operator 234 as fading information. The fading information refers to an average change amount in channel responses for all the pilot signals, indicating the degree of fading interference. When heavy fading interference occurs, the channel responses change greatly, and as a result, the fading information gives a comparatively large value.

Thus, the differential power calculator 237 generates a difference between channel responses for pilot signals and it is eventually used for generating fading information, but not for pilot carriers.

In [0009], Hayashi reads:

FIG. 2 is a view illustrating a specific example of arrangement of symbols for transmitting pilot signals in an OFDM signal. As shown in FIG. 2, pilot signals P1 are transmitted every four symbols, so that channel responses for the pilot signals P1 are obtained every four symbols. This indicates that channel responses for three data signals 01 between the adjacent pilot signals must be determined from the channel responses for the pilot signals P1.

Thus, the pilot signals are transmitted every four symbols. In other words, Hayashi discloses that there are three data signals between the adjacent pilot signals.

Notably, there is nothing related to a power based pattern in Hayashi, and hence there is not a distinguishable power based pattern for pilot carriers. Thus, Hayashi does not disclose establishing “a distinguishable power based pattern for pilot carriers” as recited in claim 1. Accordingly, the pilot signals of [0009] of Hayashi are based on a signal transmission pattern as one pilot signal in every fourth symbols, and are different from the “distinguishable power based pattern for pilot carriers” as claimed. As such, the combination of Keevill and Hayashi, even if proper, fails to teach or suggest all of the elements recited in claim 1 and hence the rejection under 35 U.S.C. § 103 (a) is improper. Applicants submit that claim 1 is in condition for allowance.

Independent claims 29-32 are allowable at least for reasons analogous to those given in support of claim 1. The pending claims that respectively depend on independent claims 1 and 29-32 are allowable at least due to their dependence on an allowable claim, in addition to the features they recite.

CONCLUSION

Applicants respectfully submit that the pending claims are in condition for allowance. Favorable reconsideration of this application is respectfully requested. The Examiner is invited to contact the undersigned should it be deemed necessary to facilitate prosecution of the application.

Respectfully submitted,
BANNER & WITCOFF, LTD.

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By: Christopher M. Swickhamer
Christopher M. Swickhamer
Registration No. 59,853
BANNER & WITCOFF, LTD.
10 South Wacker Drive,
Suite 3000
Chicago, IL 60606
Telephone: 312-463-5000
Facsimile: 312-463-5001